

CRF Processing Date : 7/29/02
 Edited by: DC
 Verified by: DC (STIC staff)

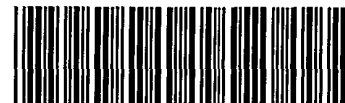
Serial Number: 10/069,439A

ENTERED

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically: _____
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other _____
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically: _____
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: _____
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: _____
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: _____
- ☐ Deleted extra, invalid, headings used by an applicant, specifically: _____
- ☒ Deleted: ☒ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file;
☐ page numbers throughout text; ☐ other invalid text, such as _____
- ☐ Inserted mandatory headings, specifically: _____
- ☐ Corrected an obvious error in the response, specifically: _____
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically: _____
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted **ending** stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: _____
- ☐ Other: _____

*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

3/1/95



PCT10.

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/069,439A

DATE: 07/29/2002 8.5
TIME: 15:43:59

Input Set : A:\PT0.DC.txt

Output Set: N:\CRF3\07292002\J069439.raw

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3 <110> APPLICANT: MIYATA, TOSHIO
4   KUROKAWA, KIYOSHI
6 <120> TITLE OF INVENTION: Meg-1 protein
8 <130> FILE REFERENCE: 2605/103
C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/069,439
C--> 11 <141> CURRENT FILING DATE: 2002-06-07
13 <150> PRIOR APPLICATION NUMBER: PCT/JP00/05551
15 <151> PRIOR FILING DATE: 2000-08-18
17 <160> NUMBER OF SEQ ID NOS: 13
19 <170> SOFTWARE: FastSEQ for Windows Version 4.0
21 <210> SEQ ID NO: 1
22 <211> LENGTH: 3901
23 <212> TYPE: DNA
24 <213> ORGANISM: Homo sapiens
26 <220> FEATURE:
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28 <222> LOCATION: (23)..(2872)
30 <400> SEQUENCE: 1
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32                               Met Ala Asp Leu Ser Leu Leu Gln Glu Asp
33                               1           5           10
35 ctg cag gag gac gca gac gga ttt ggt gtg gat gac tac agc tca gag 100
36 Leu Gln Glu Asp Ala Asp Gly Phe Gly Val Asp Asp Tyr Ser Ser Glu
37                               15           20           25
39 tct gat gtg att att ata cct tca gcc ctg gac ttt gtc tca caa gat 148
40 Ser Asp Val Ile Ile Ile Pro Ser Ala Leu Asp Phe Val Ser Gln Asp
41                               30           35           40
43 gaa atg ttg acg ccc ctg ggg aga ttg gac aag tat gct gca agt gag 196
44 Glu Met Leu Thr Pro Leu Gly Arg Leu Asp Lys Tyr Ala Ala Ser Glu
45                               45           50           55
47 aac ata ttt aac aga caa atg gtg gcc cgg agt ttg ctc gat acc ttg 244
48 Asn Ile Phe Asn Arg Gln Met Val Ala Arg Ser Leu Leu Asp Thr Leu
49                               60           65           70
51 agg gaa gtc tgc gat gat gaa aga gat tgt att gct gtt ttg gaa aga 292
52 Arg Glu Val Cys Asp Asp Glu Arg Asp Cys Ile Ala Val Leu Glu Arg
53 75           80           85           90
55 att agc aga ttg gcc gat gat tca gaa cca act gtg aga gcg gag ctg 340
56 Ile Ser Arg Leu Ala Asp Asp Ser Glu Pro Thr Val Arg Ala Glu Leu
57                               95           100          105
59 atg gaa cag gtg cct cac atc gca ctg ttt tgt caa gaa aac cgg cct 388
60 Met Glu Gln Val Pro His Ile Ala Leu Phe Cys Gln Glu Asn Arg Pro
61                               110          115          120
63 tca ata cca tat gct ttt tca aaa ttc tta cta cct att gtg gtt aga 436
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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/069,439

DATE: 07/29/2002

TIME: 15:43:59

Input Set : A:\PTO.DC.txt

Output Set: N:\CRF3\07292002\J069439.raw

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64 Ser Ile Pro Tyr Ala Phe Ser Lys Phe Leu Leu Pro Ile Val Val Arg
65      125      130      135
67 tac ctt gca gat cag aat aat cag gtg agg aaa aca agt cag gca gct 484
68 Tyr Leu Ala Asp Gln Asn Asn Gln Val Arg Lys Thr Ser Gln Ala Ala
69      140      145      150
71 ttg ctg gct ctg ttg gag cag gag ctc att gaa cga ttt gat gtg gag 532
72 Leu Leu Ala Leu Leu Glu Gln Glu Leu Ile Glu Arg Phe Asp Val Glu
74 155      160      165      170
76 acc aaa gtg tgg cct gtc ctc ata gag ctg aca gcc cca gat agc aat 580
77 Thr Lys Val Trp Pro Val Leu Ile Glu Leu Thr Ala Pro Asp Ser Asn
78      175      180      185
80 gat gat gtg aaa aca gaa gct gtg gct ata atg tgc aaa atg gct ccc 628
81 Asp Asp Val Lys Thr Glu Ala Val Ala Ile Met Cys Lys Met Ala Pro
82      190      195      200
84 atg gtt ggg aag gat att aca gag cgt ctt atc ctc cct agg ttt tgt 676
85 Met Val Gly Lys Asp Ile Thr Glu Arg Leu Ile Leu Pro Arg Phe Cys
86      205      210      215
88 gag atg tgc tgc gat tgc aga atg ttt cac gtt cga aag gtc tgt gct 724
89 Glu Met Cys Cys Asp Cys Arg Met Phe His Val Arg Lys Val Cys Ala
90      220      225      230
92 gcc aat ttt gga gat att tgc agt gta gtt ggc cag caa gct act gaa 772
93 Ala Asn Phe Gly Asp Ile Cys Ser Val Val Gly Gln Gln Ala Thr Glu
94 235      240      245      250
96 gaa atg ttg ctg ccc aga ttt ttc cag ctt tgt tct gat aat gta tgg 820
97 Glu Met Leu Leu Pro Arg Phe Phe Gln Leu Cys Ser Asp Asn Val Trp
98      255      260      265
100 gga gtc cga aag gct tgt gct gaa tgc ttc atg gcg gtt tca tgt gca 868
101 Gly Val Arg Lys Ala Cys Ala Glu Cys Phe Met Ala Val Ser Cys Ala
102      270      275      280
104 aca tgt caa gaa atc cga cgg acc aaa tta tca gca ctt ttt att aat 916
105 Thr Cys Gln Glu Ile Arg Arg Thr Lys Leu Ser Ala Leu Phe Ile Asn
106      285      290      295
108 ttg atc agt gat cct tca cgt tgg gtt cgc caa gca gct ttt cag tct 964
109 Leu Ile Ser Asp Pro Ser Arg Trp Val Arg Gln Ala Ala Phe Gln Ser
110      300      305      310
112 ctg gga cct ttc ata tct act ttt gct aat cca tct agc tca ggc cag 1012
113 Leu Gly Pro Phe Ile Ser Thr Phe Ala Asn Pro Ser Ser Ser Gly Gln
114 315      320      325      330
116 tat ttt aaa gaa gaa agc aaa agt tca gaa gag atg tca gta gaa aac 1060
117 Tyr Phe Lys Glu Glu Ser Lys Ser Ser Glu Glu Met Ser Val Glu Asn
118      335      340      345
120 aaa aat agg acc aga gat caa gaa gcc cca gag gat gta caa gtc agg 1108
121 Lys Asn Arg Thr Arg Asp Gln Glu Ala Pro Glu Asp Val Gln Val Arg
122      350      355      360
124 cca gag gat act cct tca gat ctc agt gtt agt aat tcc agt gtc ata 1156
125 Pro Glu Asp Thr Pro Ser Asp Leu Ser Val Ser Asn Ser Ser Val Ile
126      365      370      375
128 ctg gaa aac acg atg gaa gac cat gct gct gag gca tcc ggg aag cct 1204
129 Leu Glu Asn Thr Met Glu Asp His Ala Ala Glu Ala Ser Gly Lys Pro

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Input Set : A:\PTO.DC.txt

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130	380	385	390	
132	cta ggt gaa att agt gtt cca ctg gac agc tct tta ctt tgt act ttg	1252		
133	Leu Gly Glu Ile Ser Val Pro Leu Asp Ser Ser Leu Leu Cys Thr Leu			
134	395 400 405 410			
136	tcc tca gaa tct cac cag gaa gca gct agt aat gag aat gat aaa aaa	1300		
137	Ser Ser Glu Ser His Gln Glu Ala Ala Ser Asn Glu Asn Asp Lys Lys			
138	415 420 425			
140	cct ggt aac tac aaa tct atg tta cga cca gag gtt ggc acc act tca	1348		
141	Pro Gly Asn Tyr Lys Ser Met Leu Arg Pro Glu Val Gly Thr Thr Ser			
142	430 435 440			
144	caa gat tca gct ctc tta gat cag gaa ttg tat aac tcc ttc cat ttc	1396		
145	Gln Asp Ser Ala Leu Leu Asp Gln Glu Leu Tyr Asn Ser Phe His Phe			
146	445 450 455			
148	tgg agg act cct ctt cct gaa ata gat cta gac ata gag ctt gaa cag	1444		
149	Trp Arg Thr Pro Leu Pro Glu Ile Asp Leu Asp Ile Glu Leu Glu Gln			
150	460 465 470			
152	aac tct ggg gga aaa ccc agc cca gag gga cca gag gaa gaa tct gag	1492		
153	Asn Ser Gly Gly Lys Pro Ser Pro Glu Gly Pro Glu Glu Glu Ser Glu			
154	475 480 485 490			
156	ggc cct gtg ccc agt tct cca aac atc acc atg gcc acc aga aag gaa	1540		
157	Gly Pro Val Pro Ser Ser Pro Asn Ile Thr Met Ala Thr Arg Lys Glu			
158	495 500 505			
160	ctg gaa gaa atg ata gaa aat cta gag ccc cac att gat gat cca gat	1588		
161	Leu Glu Glu Met Ile Glu Asn Leu Glu Pro His Ile Asp Asp Pro Asp			
162	510 515 520			
164	gtt aaa gca caa gtg gaa gtg ctg tcc gct gca cta cgt gct tcc agc	1636		
165	Val Lys Ala Gln Val Glu Val Leu Ser Ala Ala Leu Arg Ala Ser Ser			
166	525 530 535			
168	ctg gat gca cat gaa gag acc atc agt ata gaa aag aga agt gat ttg	1684		
169	Leu Asp Ala His Glu Glu Thr Ile Ser Ile Glu Lys Arg Ser Asp Leu			
170	540 545 550			
173	caa gat gaa ctg gat ata aat gag cta cca aat tgt aaa ata aat caa	1732		
174	Gln Asp Glu Leu Asp Ile Asn Glu Leu Pro Asn Cys Lys Ile Asn Gln			
175	555 560 565 570			
177	gaa gat tct gtg cct tta atc agc gat gct gtt gag aat atg gac tcc	1780		
178	Glu Asp Ser Val Pro Leu Ile Ser Asp Ala Val Glu Asn Met Asp Ser			
179	575 580 585			
181	act ctt cac tat att cac aac gat tca gac ttg agc aac aat agc agt	1828		
182	Thr Leu His Tyr Ile His Asn Asp Ser Asp Leu Ser Asn Asn Ser Ser			
183	590 595 600			
185	ttt agc cct gat gag gaa agg aga act aaa gta caa gat gtt gta cct	1876		
186	Phe Ser Pro Asp Glu Glu Arg Arg Thr Lys Val Gln Asp Val Val Pro			
187	605 610 615			
189	cag gcg ttg tta gat cag tat tta tct atg act gac cct tct cgt gca	1924		
190	Gln Ala Leu Leu Asp Gln Tyr Leu Ser Met Thr Asp Pro Ser Arg Ala			
191	620 625 630			
193	cag acg gtt gac act gaa att gct aag cac tgt gca tat agc ctc cct	1972		
194	Gln Thr Val Asp Thr Glu Ile Ala Lys His Cys Ala Tyr Ser Leu Pro			
195	635 640 645 650			

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Input Set : A:\PTO.DC.txt

Output Set: N:\CRF3\07292002\J069439.raw

197	ggt	gtg	gcc	ttg	aca	ctc	gga	aga	cag	aat	tgg	cac	tgc	ctg	aga	gag	2020
198	Gly	Val	Ala	Leu	Thr	Leu	Gly	Arg	Gln	Asn	Trp	His	Cys	Leu	Arg	Glu	
199				655						660						665	
201	acg	tat	gag	act	ctg	gcc	tca	gac	atg	cag	tgg	aaa	gtt	cga	cga	act	2068
202	Thr	Tyr	Glu	Thr	Leu	Ala	Ser	Asp	Met	Gln	Trp	Lys	Val	Arg	Arg	Thr	
203				670						675						680	
205	cta	gca	ttc	tcc	atc	cac	gag	ctt	gca	gtt	att	ctt	gga	gat	caa	ttg	2116
206	Leu	Ala	Phe	Ser	Ile	His	Glu	Leu	Ala	Val	Ile	Leu	Gly	Asp	Gln	Leu	
207			685							690						695	
209	aca	gct	gca	gat	ctg	gtt	cca	att	ttt	aat	gga	ttt	tta	aaa	gac	ctc	2164
210	Thr	Ala	Ala	Asp	Leu	Val	Pro	Ile	Phe	Asn	Gly	Phe	Leu	Lys	Asp	Leu	
211			700							705						710	
213	gat	gaa	gtc	agg	ata	ggt	gtt	ctt	aaa	cac	ttg	cat	gat	ttt	ctg	aag	2212
214	Asp	Glu	Val	Arg	Ile	Gly	Val	Leu	Lys	His	Leu	His	Asp	Phe	Leu	Lys	
215	715						720									730	
217	ctt	ctt	cat	att	gac	aaa	aga	aga	gaa	tat	ctt	tat	caa	ctt	cag	gag	2260
218	Leu	Leu	His	Ile	Asp	Lys	Arg	Arg	Glu	Tyr	Leu	Tyr	Gln	Leu	Gln	Glu	
219				735							740					745	
221	ttt	ttg	gtg	aca	gat	aat	agt	aga	aat	tgg	cgg	ttt	cga	gct	gaa	ctg	2308
222	Phe	Leu	Val	Thr	Asp	Asn	Ser	Arg	Asn	Trp	Arg	Phe	Arg	Ala	Glu	Leu	
223				750						755						760	
225	gct	gaa	cag	ctg	att	tta	ctt	cta	gag	tta	tat	agt	ccc	aga	gat	gtt	2356
226	Ala	Glu	Gln	Leu	Ile	Leu	Leu	Leu	Glu	Leu	Tyr	Ser	Pro	Arg	Asp	Val	
227			765							770						775	
231	tat	gac	tat	tta	cgt	ccc	att	gct	ctg	aat	ctg	tgt	gca	gac	aaa	gtt	2404
232	Tyr	Asp	Tyr	Leu	Arg	Pro	Ile	Ala	Leu	Asn	Leu	Cys	Ala	Asp	Lys	Val	
233			780							785						790	
235	tct	tct	gtt	cgt	tgg	att	tcc	tac	aag	ttg	gtc	agc	gag	atg	gtg	aag	2452
236	Ser	Ser	Val	Arg	Trp	Ile	Ser	Tyr	Lys	Leu	Val	Ser	Glu	Met	Val	Lys	
237	795						800					805				810	
239	aag	ctg	cac	gcg	gca	aca	cca	cca	acg	ttc	gga	gtg	gac	ctc	atc	aat	2500
240	Lys	Leu	His	Ala	Ala	Thr	Pro	Pro	Thr	Phe	Gly	Val	Asp	Leu	Ile	Asn	
241				815							820					825	
243	gag	ctt	gtg	gag	aac	ttt	ggc	aga	tgt	ccc	aag	tgg	tct	ggt	cgg	caa	2548
244	Glu	Leu	Val	Glu	Asn	Phe	Gly	Arg	Cys	Pro	Lys	Trp	Ser	Gly	Arg	Gln	
245				830						835						840	
247	gcc	ttt	gtc	ttt	gtc	tgc	cag	act	gtc	att	gag	gat	gac	tgc	ctt	ccc	2596
248	Ala	Phe	Val	Phe	Val	Cys	Gln	Thr	Val	Ile	Glu	Asp	Asp	Cys	Leu	Pro	
249			845							850						855	
251	atg	gac	cag	ttt	gct	gtg	cat	ctc	atg	ccg	cat	ctg	cta	acc	tta	gca	2644
252	Met	Asp	Gln	Phe	Ala	Val	His	Leu	Met	Pro	His	Leu	Leu	Thr	Leu	Ala	
253			860							865						870	
255	aat	gac	agg	gtt	cct	aac	gtg	cga	gtg	ctg	ctt	gca	aag	aca	tta	aga	2692
256	Asn	Asp	Arg	Val	Pro	Asn	Val	Arg	Val	Leu	Leu	Ala	Lys	Thr	Leu	Arg	
257	875						880					885				890	
259	caa	act	cta	cta	gaa	aaa	gac	tat	ttc	ttg	gcc	tct	gcc	agc	tgc	cac	2740
260	Gln	Thr	Leu	Leu	Glu	Lys	Asp	Tyr	Phe	Leu	Ala	Ser	Ala	Ser	Cys	His	
261				895							900					905	
263	cag	gag	gct	gtg	gag	cag	acc	atc	atg	gct	ctt	cag	atg	gac	cgt	gac	2788

RAW SEQUENCE LISTING

DATE: 07/29/2002

PATENT APPLICATION: US/10/069,439

TIME: 15:43:59

Input Set : A:\PTO.DC.txt

Output Set: N:\CRF3\07292002\J069439.raw

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264 Gln Glu Ala Val Glu Gln Thr Ile Met Ala Leu Gln Met Asp Arg Asp
265          910          915          920
267 agc gat gtc aag tat ttt gca agc atc cac cct gcc agt acc aaa atc 2836
268 Ser Asp Val Lys Tyr Phe Ala Ser Ile His Pro Ala Ser Thr Lys Ile
269          925          930          935
271 tcc gaa gat gcc atg agc aca gcg tcc tca acc tac tagaaggctt 2882
272 Ser Glu Asp Ala Met Ser Thr Ala Ser Ser Thr Tyr
273          940          945          950
275 gaatctcgggt gtcttttctg cttccatgag agccgaggtt cagtgggcat tcgccacgca 2942
277 tgtgacctgg gatagctttc gggggaggag agaccttctt ctcttgcgga cttcattgca 3002
279 ggtgcaagtt gcctacaccc aataccaggg atttcaagag tcaagagaaa gtacagtaaa 3062
281 cactattatc ttatcttgac tttaagggga aataatttct cagaggatta taattgtcac 3122
283 cgaagcctta aatcctttctc ttctgactg aatgaaactt gaattggcag agcattttcc 3182
285 ttatggaagg gatgagattc ccagagacct gcattgcttt ctcttggttt tatttaacaa 3242
287 tcgacaaatg aaattcttac agcctgaagg cagacgtgtg cccagatgtg aaagagacct 3302
289 tcagtatcag ccctaactct tctctcccag gaaggacttg ctgggctctg tggccagctg 3362
291 tccagcccag ccctgtgtgt gaatcgtttg tgacgtgtgc aaatgggaaa ggagggtttt 3422
293 ttacatctcc taaaggacct gatgccaaca caagtaggat tgacttaaac tcttaagcgc 3482
295 agcatattgc tgtacacatt tacagaatgg ttgctgagtg tctgtgtctg atttttcat 3542
297 gctggtcatg acctgaagg aatttattag acgtataatg tatgtctggt gtttttaact 3602
299 tgatcatgat cagctctgag gtgcaacttc ttcacatact gtacatacct gtgaccactc 3662
301 ttgggagtg tgcagtcttt aatcatgctg tttaaactgt tgtggcacia gttctcttgt 3722
303 ccaaataaaa tttattaata agatctatag agagagatat atacactttt gattgttttc 3782
305 tagatgtcta ccaataaatg caatttgtga cctgtattaa tgatttaaaag tggggaaact 3842
307 agattaaaat atttgtcttt taataaaaata aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3901
310 <210> SEQ ID NO: 2
311 <211> LENGTH: 950
312 <212> TYPE: PRT
313 <213> ORGANISM: Homo sapiens
315 <400> SEQUENCE: 2
316 Met Ala Asp Leu Ser Leu Leu Gln Glu Asp Leu Gln Glu Asp Ala Asp
317 1 5 10 15
319 Gly Phe Gly Val Asp Asp Tyr Ser Ser Glu Ser Asp Val Ile Ile Ile
320 20 25 30
322 Pro Ser Ala Leu Asp Phe Val Ser Gln Asp Glu Met Leu Thr Pro Leu
323 35 40 45
325 Gly Arg Leu Asp Lys Tyr Ala Ala Ser Glu Asn Ile Phe Asn Arg Gln
326 50 55 60
328 Met Val Ala Arg Ser Leu Leu Asp Thr Leu Arg Glu Val Cys Asp Asp
329 65 70 75 80
331 Glu Arg Asp Cys Ile Ala Val Leu Glu Arg Ile Ser Arg Leu Ala Asp
332 85 90 95
334 Asp Ser Glu Pro Thr Val Arg Ala Glu Leu Met Glu Gln Val Pro His
335 100 105 110
337 Ile Ala Leu Phe Cys Gln Glu Asn Arg Pro Ser Ile Pro Tyr Ala Phe
338 115 120 125
340 Ser Lys Phe Leu Leu Pro Ile Val Val Arg Tyr Leu Ala Asp Gln Asn
341 130 135 140
343 Asn Gln Val Arg Lys Thr Ser Gln Ala Ala Leu Leu Ala Leu Leu Glu

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Use of n and / or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to ensure a corresponding explanation is present in the <220> to <223> fields of each sequence using n or Xaa.

VERIFICATION SUMMARY

DATE: 07/29/2002

PATENT APPLICATION: US/10/069,439

TIME: 15:44:00

Input Set : A:\PTO.DC.txt

Output Set: N:\CRF3\07292002\J069439.raw

L:10 M:270 C: Current Application Number differs, Replaced Application Number

L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:868 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11

L:870 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11

L:871 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11